

# **Miccosukee Canopy Road Greenway**

## **MANAGEMENT PLAN**

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**Tallahassee-Leon County Planning Department**

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**MICCOSUKEE CANOPY ROAD GREENWAY  
ACQUISITION AND RESTORATION COUNCIL (ARC) EXECUTIVE SUMMARY**

**LEAD AGENCY:** Leon County  
Department of Parks and Recreation

**COMMON NAME OF PROPERTY:** Miccosukee Canopy Road Greenway

**LOCATION:** Leon County, Florida

**ACREAGE TOTAL:** 503.4 acres

**ACREAGE BREAKDOWN:**

<u>Land Cover Classification</u>	<u>Acres</u>
Upland Forest	337.69
Savanna	3.2
Floodplain/Bottomland Forest	9.8
Pasture/Open Fields	141.20
Wetlands	2.23

**LEASE/MANAGEMENT AGREEMENT NUMBER(S):** 4259

**USE:** Single

**MANAGEMENT RESPONSIBILITIES:**

<u>Agency</u>	<u>Responsibility</u>
Leon County Department of Parks and Recreation	Multi-use Trail System

**DESIGNATED LAND USE:** Multi-use Trail System and other  
Passive Recreation Uses.

**SUBLEASE:** 4259-01 (Leon County)

**ENCUMBRANCES:** None

**TYPE OF ACQUISITION(S) :** Preservation 2000

**UNIQUE NATURAL FEATURES:**

The Miccosukee Canopy Road Greenway (MCRG), a 6.4 mile long linear park approximately 503 acres in size, was purchased by the State of Florida with assistance from the Trust for Public Land, and leased to Leon County in May 1998. The park borders a protected tree canopy zone preserved by county ordinance for its historic and scenic significance.

This park borders a protected tree canopy zone preserved by county ordinance for its historic and scenic significance. Of the total 503 acres, approximately 354 acres (70%) are comprised of forested uplands, three acres (1%) are wetlands, with the remaining 144 acres (29%) in pasture land or open fields.

There are no permanent waterbodies directly within the Greenway. However, there is a small intermittent solution depression lake southeast of Dove Pond approximately 1.6 acres in size which is normally dry, and there also are several small intermittent watercourses which total approximately 1560 linear feet in length. These watercourses are normally dry, but drain to the south during significant meteorological events. Dove Pond (also shown on some maps as Welaunee Lake), approximately 36 acres in size and the receiving waterbody for the 1200 acre Welaunee closed basin, is located immediately northwest of the Greenway and is surrounded by presently undeveloped land. Normally wet, this lake drains during periods of very high water south across a narrow portion of the Greenway. Dove Pond is a solution depression lake, which is common to northern Leon County. There are approximately 2.2-2.5 acres of wetlands within the Greenway. These comprise an intermittent solution depression lake southeast of Dove Pond.

Dove Pond appears to have a small fish population as the result of stocking or high water connectivity during significant meteorological events. Expected additional species associated with this waterbody include several centrarchids, pickerel, minnows, bullfrogs, pig frogs, leopard frogs, and other common species endemic to this region. A banded water snake was observed on the Greenway as part of a natural features inventory.

Florida Natural Areas Inventory records included several listed plant and animal species element occurrence records in or near the Greenway. The only listed species indicated by the FNAI report directly within the Greenway included an element occurrence record for Sherman's Fox Squirrel (*Sciurus niger shermani*).

Unique natural features within the Greenway include several karst ravines, and a number of different native and other forest stands.

#### **ARCHAEOLOGICAL/HISTORICAL FEATURES:**

Much of the Greenway has been managed for agricultural purposes in the past, including cleared pasture, logging, and crops. There are one or more old homesites as well. However, there are scenic and highly valued rural vistas such as canopy road forest tunnels, meadows/pasture, forested wetlands, and clay hill lakes within and adjacent to the Greenway. As the urban area of Tallahassee continues to expand and develop more intensely, these vistas will become more rare and valuable.

#### **MANAGEMENT NEEDS:**

As described, the Miccosukee Canopy Road Greenway is a multi-use park that preserves a historical canopy road and its immediate environs, and allows passive recreational use. Towards this goal, the following management objectives will be pursued:

- conserve and maintain natural resources;
- preserve the tree canopy on Miccosukee Road;
- replant native trees and vegetation;
- continue present management with open fields and wooded areas;
- provide for passive recreational uses including walking, biking, skating and horseback riding;
- provide for educational and alternative transportation uses.

The Miccosukee Canopy Road Greenway is a linear greenway with rural spaces and scenic views. It is also located within a growing urban area and will eventually be surrounded by residential and other development. Existing and future special management considerations include, but are not limited to, access, prescribed burning, and trail and other facility use conflicts.

Recommended management practices for plant and animal communities and other Greenway resources are provided in detail in the Forest Stewardship Management Plan for the Greenway. At this time, there are minimal improvements to the property. These include perimeter fencing and a dirt and gravel parking area approximately one acre in size at the Edenfield Drive/Miccosukee Road intersection, with a wooden pole fence, a kiosk, and a portable toilet. Uses include mowing of open fields by county personnel or by volunteers, and public access is provided at the Edenfield Drive/Miccosukee Road intersection parking area. Activities include hiking, birdwatching, picnicking, and other passive recreational activities.

Planned recreational improvements for the Greenway include the following:

- Multi-use loop trails that may divide at some future point into separate unpaved bike-ped and equestrian trails that will meander and traverse the full length of the Greenway;
- signage;
- unpaved parking areas at Fleischmann, Edenfield, Thornton, and Crump road with information signs;
- a butterfly meadow with benches, gazebo, interpretive signage, and specific plantings of native vegetation;
- trail benches, gazebos and/or shelters at scenic locations;
- a wildlife observation deck and/or boardwalk overlooking Dove Pond;
- a stream-crossing boardwalk at Arvah Branch;
- pedestrian/equestrian crossings on Miccosukee Road at or near Miles Johnson Road and west of Miccosukee Hills subdivision;
- planting of native trees and vegetation and removal of exotic trees and other plants;
- construction of wildlife habitats, bird houses, bat houses and other such devices;
- memorial gardens;
- pavilions for picnicking and gatherings at trailheads and near parking areas; and
- a paved, handicapped-accessible hard surface trail along the circumference of the Edenfield Meadow with connections to the picnic area and the Dove Lake overlook.

Additional, non-recreational improvements include water and electrical service, irrigation for garden areas, and portable toilet facilities for each trailhead. A public telephone will be installed

at each established parking area within the Greenway. At least one public drinking water fountain will be installed at the Edenfield trailhead parking area.

**ACQUISITION NEEDS/ACREAGES:** None

**SURPLUS LAND/ACREAGE:** None

**PUBLIC INVOLVEMENT:**

The Friends of the Miccosukee Canopy Road Greenway, an incorporated non-profit group, is the principal citizens committee providing input into the creation, design, and eventual use of the Greenway. The purpose of this group is to promote broad community participation in the development of the Miccosukee Canopy Road Greenway as a park and trail facility; to promote recreational, educational and alternative transportation uses for the facility; and to provide assistance to Leon County for its management and operational plans.

An advertised public meeting to present preliminary plans and to solicit and discuss suggestions for activities and uses within the Greenway was held on May 17, 1999 at the W.T. Moore Elementary School in Leon County. Another public meeting was held on June 4<sup>th</sup>, 2001 at Leon County Public Works. A summary of recorded comments and suggestions from both meetings is provided in Appendix B. A public hearing was held on July 24<sup>th</sup>, 2001 at the Leon County Courthouse as part of a regularly scheduled Leon County Board of County Commissioners meeting.

The public advisory group met three times over the course of several months to provide input and respond to draft versions of the management plan.



## **INTRODUCTION**

The Miccosukee Canopy Road Greenway (MCRG), a 6.4 mile long linear park approximately 503 acres in size, is located in Leon County, Florida and parallels Miccosukee Road from Fleischmann Road east to Crump Road (Map 1). With assistance from the Trust for Public Land, this property was purchased by the Board of Trustees of the Internal Improvement Trust Fund under the Preservation 2000 program, leased to the Florida Department of Environmental Protection, Office of Greenways and Trails, and subleased to Leon County.

This park borders a protected tree canopy zone preserved by county ordinance for its historic and scenic significance. Of the total 503 acres, approximately 354 acres (70%) are comprised of forested uplands, three acres (1%) are wetlands, with the remaining 144 acres (29%) in pasture land or open fields.

## **PROJECT PURPOSE AND SCOPE**

This plan serves as the basic statement of policy and direction for the management of the Miccosukee Canopy Road Greenway as a unit of Leon County's park system. It identifies the objectives, criteria, and standards used to guide all aspects of park administration, and sets forth the specific measures that will be implemented to meet management objectives. This plan is intended to meet the requirements of Section 253.034 and 259.032, Florida Statutes, Chapter 18, Florida Administrative Code, and to be consistent with the State Lands Management Plan. All development and resource alteration encompassed in this plan is subject to the granting of all appropriate permits, easements, licenses, and other required legal instruments. Approval of this management plan does not constitute an exemption from complying with all applicable local, state, or federal regulations.

The plan describes the natural and cultural resources of the Greenway, as well as a description of their proposed uses and facilities. Resource management problems and needs are identified, and specific management objectives are established. The latter provides guidance on the application of such measures as prescribed burning, exotic species removal, and restoration of natural conditions.

## **Goal & Objectives**

The goal of the Miccosukee Canopy Road Greenway is to provide recreational, educational, and transportation opportunities and uses to the citizens of Leon County. Towards these ends, the Miccosukee Canopy Road Greenway will provide the following multiple uses:

1. conservation and improvement of existing natural resources, including native trees, vegetation and wildlife;
2. enhancements to encourage comfortable, enjoyable use of the trails;
3. the replanting where appropriate of native plant species in order to attract indigenous birds, butterflies and other wildlife; and
4. educational programs that focus on the identification of native trees, indigenous and migratory birds and waterfowl, and the ecology of plants and animals in this area.

## **Public Participation**

The Friends of the Miccosukee Canopy Road Greenway, an incorporated non-profit group, is the principal citizens committee providing input into the creation, design, and eventual use of the Greenway. The purpose of this group is to promote broad community participation in the development of the Miccosukee Canopy Road Greenway as a park and trail facility; to promote recreational, educational and alternative transportation uses for the facility; and to provide assistance to Leon County for its management and operational plans.

During the planning process, all potential outdoor recreation uses were considered, and those determined to be most appropriate are discussed within this plan. It was also determined through the planning process that secondary/multiple management uses such as mining, silviculture, agriculture, or other uses would not be compatible and would interfere with the primary project purposes of outdoor recreation and conservation.

The potential for generating revenue to enhance management was also analyzed. It was determined that there may be some opportunities such as hay grass production and food or other concessions (e.g., bicycle or horse rentals) in the future. However, these activities will be employed on a case-by-case basis as a means of supplementing greenway management funding. Concessions will be limited at this time to special events or other temporary, self-contained, mobile concessions. Other funds will be sought through grants.

The use of private land managers to facilitate restoration and management of this unit was also analyzed. There may opportunities for this in the future; however, decisions regarding these management activities (e.g., mitigation, timber management, removal of exotic species, habitat restoration, etc.) will be made on a case-by-case basis.

An advertised public meeting to present preliminary plans and to solicit and discuss suggestions for activities and uses within the Greenway was held on May 17, 1999 at the W.T. Moore Elementary School in Leon County. Another public meeting was held on June 4<sup>th</sup>, 2001 at Leon County Public Works. A summary of recorded comments and suggestions from both meetings is provided in Appendix B. A public hearing was held on July 24<sup>th</sup>, 2001 at the Leon County Courthouse as part of a regularly scheduled Leon County Board of County Commissioners meeting.

## **Public Advisory Group**

Section 259.032(10)(b), Florida Statutes, requires an advisory group composed, at a minimum, of representatives of the lead land managing agency, comanaging entities, local private property owners, the appropriate soil and water conservation district, a local conservation organization, and a local elected official, to provide input into the management plan (for parcels over 160 acres). The members of the advisory group is as follows:

- |                                     |   |
|-------------------------------------|---|
| 1. Dale Allen                       | Trust for Public Land                               |
| 2. Kathy Archibald                  | Ochlockonee Soil and Water Conservation District    |
| 3. Paul Cozzie                      | Leon County Division of Parks and Recreation        |
| 4. Kit Davenport                    | Powerhouse, Inc. (Welaunee Plantation)              |
| 5. Joy Johnson                      | Midyette Plantation                                 |
| 6. Rob Lombardo &<br>Chuck Mitchell | Friends of the Miccosukee Canopy Road Greenway      |
| 7. Heather Pence                    | DEP Office of Greenways and Trails                  |
| 8. Nancy Stephens                   | Southern Trail Riders                               |
| 9. Terry Ryan                       | Concerned Citizen for Miccosukee Road Safety Issues |
| 10. The Honorable Cliff Thael       | Leon County Board of County Commissioners           |
| 11. Buddy Vincent                   | Little Pond Farm                                    |
| 12. Robert Carruthers               | Capital City Cyclists                               |

In addition to the above, the following individuals and organizations have provided significant input into the management plan:

Leon County Department of Community Development  
 Leon County Division of Parks and Recreation  
 Tallahassee – Leon County Planning Department  
 City of Tallahassee Growth Management Department  
 Stan Rosenthal/Leon County Agricultural Extension Office  
 Florida Fish and Wildlife Conservation Commission

The members of the advisory group met three times over the course of several months to provide input and respond to draft versions of the management plan.

## NATURAL RESOURCES

A Tallahassee – Leon County Natural Features Inventory (NFI) was conducted by Helge R. and Russell H. Swanson and Taramati V. Shenoy, and published in January 2000 (see Appendix D). Required by local ordinance, this NFI was conducted in order to eventually secure City of Tallahassee permits for the various proposed facilities and management activities as required. The NFI inventories and describes in detail various regulated natural features such as native and other forest types, significant and severe grades, listed species, floodplains, wetlands, water features, archaeological or historical sites, karst features, canopy roads (a local designation for certain local historical roads subject to additional regulation), wells, and closed basin watersheds. As a part of the NFI, the Florida Natural Areas Inventory (FNAI) database was queried for “element occurrence records.” The results of this query are included as a part of the NFI.

The current flora and fauna of the site is a result of previous management. To “preserve” the current state, the management techniques that the plantation from which the property was purchased by the state used will need to be mimicked. An additional threat to native species is the recent arrival of many invasive exotic plants. These will need to be controlled to maintain optimum native flora fauna. Management for all of these resources will involve practices which promote good soil and water conservation.

A Forest Stewardship Management Plan has been prepared for the Greenway by Stan Rosenthal of the University of Florida/Leon County Cooperative Extension Service and Wayne Harris of the Florida Wildlife Commission. This management plan includes a complete description of existing natural resources, including natural communities and exotics, and Best Management Practices and schedules for protecting and enhancing these communities.

The Miccosukee Canopy Road Greenway is not within an Aquatic Preserve or a designated Area of Critical State Concern or an area under study for such designation.

### Soils

Soil types occurring on the property include Lucy, Norfolk, Orangeburg, Plummer, Ocilla, Albany, Wagram, Lynchburg, Blanton and Pelham (See Table 1 and Map 3). Lucy fine sand is a well-drained soil on upland ridges and hillsides. Slopes vary from 0-5%. Natural fertility is low. Norfolk loamy fine sand has a 2-5% and 5-8% slope and is well drained. It is a gently sloping soil to strongly sloping on uplands. Natural fertility is moderate to moderately low on steeper slopes. Orangeburg fine sandy loam is a well drained, gently to strongly sloping soil on uplands. The slopes of Orangeburg fine sandy loam vary between 2-5%, 5-8% and 8-12%. Natural fertility is moderate. The Plummer fine sand is a poorly drained nearly level soil that is in low areas and poorly defined drainage ways. The water table is within 15 inches of the soil surface for 3-6 months in most years. Natural fertility is low. Ocilla fine sand is a somewhat poorly drained, nearly level soil on moderately low uplands. Ocilla soil has a water table within a depth of 15 to 30 inches for 2 to 6 months. Slopes range from 0-2% and are slightly convex. Natural fertility is low. Albany loamy fine sand is a somewhat poorly drained, nearly level soil (0-2% slopes) on lower elevations of uplands. The water table reaches 12 to 30 inches below the soil surface for 1 to 2 months of the year but the upper soil layers usually have very low available water capacity. Albany soil's natural fertility is low. Wagram loamy fine sand is a well drained nearly level to gently sloping soil on broad upland ridges. Slopes are from 0-5%. Natural fertility is moderately

low. Pelham fine sand is a poorly drained nearly level soil on broad flatwoods, in depressional areas and in some drainage ways on uplands. Slopes range from 0-2%. The water table is within 15 inches of the soil surface for 3-6 months in most years. Natural fertility is low. Lynchburg fine sandy loam is a somewhat poorly drained, nearly level soil that is found in shallow depressional areas and on broad interstream divides. Slopes range from 0-2%. Lynchburg soil has a water table that is 6-20 inches below the surface for 1 to 3 months during spring and winter months in most years. Natural fertility is low. The Blanton fine sand soil is a nearly level to gently sloping soil on moderately well drained uplands. Slopes are 0-5%. It has low natural fertility.

Table 1: Soil Types.

Soil Type	Vegetative Community	Slope	Drainage	Site Index <sup>1</sup>
Lucy	pine/hardwood	0-5%	well-drained	80
Norfolk	pine/hardwood	2-5% and 5-8%	well-drained	90
Orangeburg	pine/hardwood	2-5%, 5-8% and 8-12%	well-drained	90
Plummer	wetland forest	level	poorly drained	90
Ocilla	pine/hardwood	0-2%	somewhat poorly drained	80
Albany	pine/hardwood	0-2%	somewhat poorly drained	80
Wagram	pine/hardwood	0-5%	well-drained	80
Lynchburg	pine/hardwood	0-2%	somewhat poorly drained	90
Blanton	pine/hardwood	0-5%	moderately well-drained	80
Pelham	wetland forest	0-2%	poorly drained	90

<sup>1</sup> Site Index is defined as the average height of the dominant and co-dominant trees within an even-aged stand of the selected species at age 50 years.

### Archaeological and Historical Resources

According to the Florida Division of Historical Resources, at this time, no specific historical sites are known within the Greenway. However, the Division has also recommended that a professional archaeological survey be conducted prior to any ground-disturbing activities. The Miccosukee Canopy Road Greenway was awarded in 1999 a Historic Preservation Award for Preserving Rural Vistas.

### Water Resources

There are no permanent waterbodies directly within the Greenway. However, there is a small intermittent solution depression lake southeast of Dove Pond approximately 1.6 acres in size which is normally dry, and there also are several small intermittent watercourses which total approximately 1560 linear feet in length. These watercourses are normally dry, but drain to the south during significant meteorological events. Dove Pond (also shown on some maps as Welaunee Lake), approximately 36 acres in size and the receiving waterbody for the 1200 acre Welaunee closed basin, is located immediately northwest of the Greenway and is surrounded by presently undeveloped land. Normally wet, this lake drains during periods of very high water south across a narrow portion of the Greenway. Dove Pond is a solution depression lake, which is common to northern Leon County.

### Fish and Wildlife Habitat

Dove Pond appears to have a small fish population as the result of stocking or high water connectivity during significant meteorological events. Expected additional species associated with this waterbody include several centrarchids, pickerel, minnows, bullfrogs, pig frogs, leopard frogs, and other common species endemic to this region. During the field work required for the NFI, a banded water snake was observed.

### Listed Species

There are a number of listed plant and animal species which occur within Leon County. A complete list of rare species and natural communities, including their global and state rank, and federal, state, and occurrence status, is included in the NFI. A query of FNAI records included several element occurrence records in or near the Greenway, described and mapped in the NFI. The only listed species indicated by the FNAI report directly within the Greenway included an element occurrence record for Sherman's Fox Squirrel (*Sciurus niger shermani*).

### Beaches and Dunes

There are no beaches or dunes within the Greenway.

### Wetlands

There are approximately 2.2-2.5 acres of wetlands within the Greenway. These comprise an intermittent solution depression lake southeast of Dove Pond.

### Mineral Resources

There are no known mineral resources of significant economic value within the Greenway.

## Unique Natural Features and Outstanding Native Landscapes<sup>2</sup>

Unique natural features within the Greenway include several karst ravines, and a number of different native and other forest stands. The latter are described in detail in Appendix D.

Much of the Greenway has been managed for agricultural purposes in the past, including cleared pasture, logging, and crops. There are one or more old homesites as well. However, there are scenic and highly valued rural vistas such as canopy road forest tunnels, meadows/pasture, forested wetlands, and clay hill lakes within and adjacent to the Greenway. As the urban area of Tallahassee continues to expand and develop more intensely, these vistas will become more rare and valuable.

## Resources Listed by the Florida Natural Areas Inventory

A query of FNAI records included several element occurrence records in or near the Greenway. These are described and mapped in the NFI. The only listed species indicated by the FNAI report directly within the Greenway included an element occurrence record for Sherman's Fox Squirrel (*Sciurus niger shermani*).

## Adjacent Land Uses

Additional adjacent land uses include vacant and low-density residential, with a small amount of multi-family at the far southwestern tip of the Greenway. The vacant land (Welaunee Plantation) is primarily rural in nature, consisting of forested and open, usually pastured areas.

## Potential Ecological and Recreational Linkages

At this time, the eastern half of the Greenway (north of Interstate 10) is adjacent to several large, undeveloped areas that are interspersed with forest and open fields. There are also several areas where natural surface water drainage areas cross the Greenway. As the development of Welaunee Plantation commences, many of these areas may change in land usage, diminishing or eliminating ecological linkages or potential linkages. However, careful selection of regulatory open space areas, including the creation of conservation and/or drainage easements in 100-year flood and other environmentally sensitive areas, may help mitigate this. Allowing carefully designed, passive recreational access to these easements, based on the nature and extent of environmentally sensitive features, would be desirable.

The Tallahassee – Leon County Planning Department has identified a conceptual recreational greenway corridor connecting the Lake Lafayette Heritage Trail through the recently state-acquired Alford Arm area, north through the Miccosukee Canopy Road Greenway, and on to the Killlearn subdivision area. This corridor will likely cross the Greenway somewhere between Interstate 10 and Miles Johnson Road, and will include a soft or hard surface trail within a natural buffer. This greenway corridor has been identified in the local Blueprint 2000 planning document and the Tallahassee – Leon County Greenway Master Plan (currently under internal review).

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<sup>2</sup> See Appendix E for a complete description of all natural features.

## **PROPERTY USAGE**

### **Past and Present**

Various tribes of native American Indians have used this region for hunting and gathering and agriculture for the last ten thousand years. Following European settlement, but prior to the civil war, the land in which the Greenway is located was used for production of cotton and tobacco. This property has in recent times been managed as a plantation with timber harvesting, livestock grazing and hunting being the main uses. Prescribed fire along with some farming operations in the fields have also been major influences on the flora. There are large areas that have been allowed to reforest naturally, and there have been little to no recent uses of these areas. At this time, there is no formal usage of any of the area of the Greenway, save for a small parking area immediately north of the intersection of Miccosukee and Edenfield roads from which an open mowed area and some trails for hiking can be accessed. This usage has been light, but includes the walking of pets, kite flying, picnicking, and other intermittent day uses.

### **Future Objectives and Uses**

As previously stated, the goal of the Miccosukee Canopy Road Greenway is to provide recreational, educational, and transportation opportunities and uses to the citizens of Leon County. This includes preservation and education regarding the existing flora and fauna, as well as enhancing the aesthetic quality of the Greenway.

As required by Section 253.043, Florida Statutes, the Greenway shall be managed for natural resource-based recreation and to ensure the survival of plant and animal species and the conservation of finite and renewable natural resources for the benefit and enjoyment of all people of the state, both present and future. Furthermore, this property shall be managed for multiple-use purposes, including public access and enjoyment, resource conservation and protection, ecosystem maintenance and protection, and protection of threatened and endangered species. This will be also accomplished through the use of public-private partnerships such as the Friends of the Miccosukee Canopy Road Greenway.

Passive, natural resource-based recreational activities include hiking, bird and other floral and faunal observation and study, horseback riding, "mountain" bicycling, trail running, picnicking, kite flying, and other similar activities. Activities not allowed in the Greenway include hunting, fishing, boating, and camping of any sort.

### **Alternative Uses**

The Miccosukee Canopy Road Greenway is intended to be a passive recreational and conservation-oriented greenway. Alternate uses of this property, including active athletic fields, were considered, but ultimately rejected. Other uses, including camping, were considered to be too intense or would require too much land to provide an adequate buffer for the multiple passive recreational uses originally intended.



**Additional Parcel Acquisition**

Two planned trail crossovers linking several sections of the Greenway across Miccosukee Road are currently planned. As the use of these crossovers increases with the use of the Greenway, additional property or easements will be sought as necessary to provide enhanced sight distances at these crossings and to accommodate these and any new crossings as part of any road alignment and new road construction projects.

**Surplus Property**

At this time, there are no surplus areas or parcels not being used for the purpose for which they were originally leased.

## **MANAGEMENT ACTIVITIES**

As described, the Miccosukee Canopy Road Greenway is a multi-use park that preserves a historical canopy road and its immediate environs, and allows passive recreational use. Towards this goal, the following management objectives will be pursued:

- conserve and maintain natural resources;
- preserve the tree canopy on Miccosukee Road;
- replant native trees and vegetation;
- continue present management with open fields and wooded areas;
- provide for passive recreational uses including walking, biking, skating and horseback riding;
- provide for educational and alternative transportation uses. '

### **Authority and Responsibility**

By virtue of the 50-year sublease between DEP and Leon County, the Leon County Division of Parks and Recreation will manage and maintain the Greenway with volunteer assistance provided by Friends of the Miccosukee Canopy Road Greenway. Management plans will be developed with the assistance of the Leon County Extension Service for forestry, wildlife and agricultural resources (grasslands), aided by the Division of Parks, Tallahassee – Leon County Planning Department, and other agencies as necessary.

### **Coordination**

#### **Local Government**

Coordination between the City of Tallahassee and Leon County, including the city and county foresters who have development review authority for canopy roads, will continue on a regular basis to address access to and development of the Greenway and public safety issues. Although the park is leased by Leon County from the State of Florida, it is located within the City of Tallahassee, and Miccosukee Road is a county road. Both local governments have jurisdiction over traffic, right of way, canopy road, and environmental management permitting issues. Within the Leon County Department of Public Works, activities within the Division of Parks and Recreation, Administration/Transportation Systems, and Operations will be coordinated with the Leon County Cooperative Extension Service, the Leon County School Board, and the Leon County Sheriff's Office to assure appropriate and safe use of the Greenway.

#### **State**

The Department of Agriculture and Consumer Services, Division of Forestry, provides assistance in the development of wildfire emergency plans, and furnishes permits required for prescribed burning. The Florida Fish and Wildlife Conservation Commission enforces state laws concerning wildlife, freshwater fish, and other aquatic life, and assists in the development of Watchable Wildlife programs. The Department of State, Division of Historical Resources, has the responsibility of tracking and protecting archaeological and historical sites. The Department of Environmental Protection has myriad responsibilities concerning the environment, including the management of state conservation lands. Management and recreational activities within the MCRG will be coordinated with these agencies as appropriate and necessary.

The state Office of Greenways and Trails is required to review all proposed construction plans and proposed plans for improvements. All third party agreements for easements, concession agreements or contracts, and all other actions must also be reviewed by OGT prior to their signing.

This management plan will require approval by the Acquisition and Restoration Council and the Governor and Cabinet, sitting as the Board of Trustees of the Internal Improvement Trust Fund (Trustees). Approval of this management plan by the Trustees in no way waives the authority and/or jurisdiction of any state or other governmental entity that may have an interest in this project.

All areas subject to facilities development will be surveyed for archaeological and cultural resources and listed species prior to any ground-disturbing activities. Should any archaeological or other unknown historical resources be discovered on the property, the Division of Historical Resources will be immediately contacted.

### **Special Management Considerations**

The Miccosukee Canopy Road Greenway is a linear greenway with rural spaces and scenic views. It is also located within a growing urban area and will eventually be surrounded by residential and other development. Existing and future special management considerations include, but are not limited to, access, prescribed burning, and trail and other facility use conflicts.

### **Needs and Problems**

The Greenway is a narrow, mostly wooded, linear park which was designed to protect an existing historical canopy road and its adjacent scenic, rural views, open spaces, and forested habitats, and to provide a passive recreational resource for hikers, bicyclists, equestrians, and other users. The overall management problem will be to achieve a balance between the preservation of historical vistas and natural features and the increased use of this greenway by recreational and other users.

The NFI conducted for the Greenway identified all fragile, nonrenewable natural resources (see Appendix D). Cultural resources await a more formal survey. At this time, however, there are no known cultural resources within the Greenway. Recommended management practices for plant and animal communities and other Greenway resources are provided in detail in the Forest Stewardship Management Plan for the Greenway. A summary of these practices is provided below.

### **Impacts to and from Adjacent Properties**

Additional adjacent land uses include vacant and low-density residential, with a small amount of multi-family at the far southwestern tip of the Greenway. The vacant land is primarily rural in nature, consisting of forested and open, usually pastured areas. Some impacts are expected from nearby and adjacent neighborhoods and properties. These include potential biological nuisances, including feral domestic animals and exotic vegetation, and increased usage of the Greenway.

The Greenway may present several potential impacts on adjacent properties. These impacts may include smoke and/or fire from prescribed burning activities; noise and other potential nuisances

from recreational use; and exposure to wild animals not normally inhabiting suburban residential areas.

Accumulations of stormwater occur naturally on an intermittent basis within basins and watersheds in the vicinity of Edenfield Road and Interstate-10 (Arvah Branch), and this stormwater flows south across the Greenway in several places. In 1994, 2000, and 2001, several storm events flooded an area of the Greenway from Dove Pond south to Miccosukee Road, affecting several subdivisions downstream of the Greenway. In 1994, stormwater from several significant storm events drained across and south of the Greenway into several residential areas south of Miccosukee Road, including the Lafayette Oaks subdivision, where 13 homes were damaged and many more were indirectly affected. Leon County Public Works built a temporary berm on the Greenway under emergency rule to mitigate this flooding, and is continuing to investigate a more permanent solution.

The Florida Gas Transmission Co., Inc. owns and operates a natural gas pipeline and a related easement that crosses the Greenway in the proximity of Edenfield Road. Florida Gas has permitted use of their easement on Edenfield Road to allow cars to enter the parking area at this location.

#### Other Impacts

Miccosukee Road is currently considered by some in the community to be a hazardous road. This is due to its narrowness, increasing local traffic volumes, and high averaged speeds achieved by a significant number of road users. Leon County has addressed several of these issues through various traffic safety measures, but the traffic volume of this road will increase in the future due to increasing adjacent development and new roads created to service this development. The Greenway will likely impact this traffic volume. The Friends of the Miccosukee Canopy Road Greenway is currently working with Leon County Public Works to create a traffic safety management plan for Miccosukee Road.

### **Planned Site Development, Improvements, and Access**

#### Existing Improvements and Uses

At this time, there are minimal improvements to the property. These include perimeter fencing and a dirt and gravel parking area approximately one acre in size at the Edenfield Drive/Miccosukee Road intersection, with a wooden pole fence, a kiosk, and a portable toilet. Uses include mowing of open fields by county personnel or by volunteers, and public access is provided at the Edenfield Drive/Miccosukee Road intersection parking area. Activities include hiking, birdwatching, picnicking, and other passive recreational activities.

#### Planned Recreational Improvements

As previously stated, planned uses for the Greenway include passive recreational activities including walking, biking, skating and horseback riding, as well as natural science and resource management education and alternative transportation. Planned recreational improvements for the Greenway include the following:

- Multi-use, unpaved, loop trails that may divide at some future point into separate bike-ped and equestrian trails that will meander and traverse the full length of the Greenway;
- signage;
- unpaved parking areas at Fleischmann, Edenfield, Thornton, and Crump road with information signs;
- a butterfly meadow with benches, gazebo, interpretive signage, and specific plantings of native vegetation;
- trail benches, gazebos and/or shelters at scenic locations;
- a wildlife observation deck and/or boardwalk overlooking Dove Pond;
- a stream-crossing boardwalk at Arvah Branch;
- pedestrian/equestrian crossings on Miccosukee Road at or near Miles Johnson Road and west of Miccosukee Hills subdivision;
- planting of native trees and vegetation and removal of exotic trees and other plants;
- construction of wildlife habitats, bird houses, bat houses and other such devices;
- memorial gardens;
- pavilions for picnicking and gatherings at trailheads and near parking areas; and
- a paved, handicapped-accessible hard surface trail along the circumference of the Edenfield Meadow with connections to the picnic area and the Dove Lake overlook.

#### Other Improvements

Additional, non-recreational improvements include water and electrical service, irrigation for garden areas, and portable toilet facilities for each trailhead. A public telephone will be installed at each established parking area within the Greenway. At least one public drinking water fountain will be installed at the Edenfield trailhead parking area.

#### Impacts and Mitigation of Planned Improvements

##### *Natural Features*

Given the nature of the planned improvements and the varied nature of the Greenway (e.g., a combination of open pastures, forested areas, and rolling hills), it is unlikely that these improvements will have a significant impact on the more environmentally sensitive features within the Greenway. All parking areas are presently intended to be unpaved and will be located in presently open pastured areas, and the planned paved loop trail will be located away from any environmentally sensitive feature such as wetlands. All trails in sensitive areas will be bridged with boardwalks or other wooden structures, and all improvements will be oriented towards passive recreation and nature study, rather than large, active recreational facilities like ball fields, tennis courts, swimming pools, or other such structures.

Because the majority of the Greenway is within the City of Tallahassee city limits, most if not all improvements to the Greenway will be in accordance with the City's Environmental Management Ordinance (EMO) and will be subject to specific development permit requirements, including environmental reviews and impact analyses; site planning; and development design standards and review. Under the City's EMO, the following natural features are to be identified and mapped prior to any permitting activities:

*Preservation Areas:*

- water bodies
- water courses
- undisturbed floodplains
- wetlands
- native forests
- severe grades (greater than 20 percent slope)
- habitats of Endangered, Threatened, and Species of Special Concern, and
- areas of environmental significance

*Conservation Areas:*

- altered floodplains
- altered floodways
- altered wetlands
- altered water courses and improved elements of the primary drainage system
- high quality successional forests
- significant grades (10-20 percent slope)
- closed drainage basins
- active karst features
- special development zones, and
- canopy roads

The EMO requires Preservation and Conservation features to be placed within conservation easements to be given over the City of Tallahassee. However, these easements may be given to a mutually-agreed upon third party. At this time, the City of Tallahassee will not require these features within the Greenway to be placed within conservation easements.

A complete listing of all natural features is given in Appendix D, the Natural Features Inventory. Other features which will have to be identified include archaeological features and any necessary buffers near or adjacent to Preservation and Conservation Features. In addition, any historical or other scenic vistas should be identified for protection and management. All areas subject to facilities development will be surveyed for archaeological and cultural resources and listed species prior to any ground-disturbing activities.

At this time, Leon County has a Public Works General Permit which addresses development activities in all county parks within the city. This permit allows most minor improvements (e.g., less than one thousand square feet) with the exception of any development activities within Preservation or Conservation features or within the Canopy Road regulatory zone (100 feet from either side of the centerline of a listed Canopy Road in Leon County). Additional permits will be required for tree removal and for activities within the Canopy Road regulatory zone. The siting of trails and all other improvements will be made with due consideration to all sensitive environmental and cultural resources within the Greenway. In addition, a full-time greenway attendant, who will be a Leon County Division of Parks and Recreation employee, will monitor human activities and impacts on all natural and cultural resources within the Greenway.

### *Other*

At this time, there are no adequate measures or data available to project the number of auto and other trips the Greenway will generate. In order to acquire meaningful data, Leon County will measure through accepted professional techniques the volume and use of the Greenway, including the number of trips, as well as modes, generated by the use of the Greenway. This data will be used by the county to help manage the Greenway trail and other facilities, and to help manage traffic safety conditions on Miccosukee Road.

### Access

Except for emergency and maintenance vehicles and special events, vehicle access will be strictly limited to established parking areas/trailheads where parking and future facilities are planned. These trailheads are located at Fleischmann, Edenfield, Thornton, and Crump roads. Special event overflow parking will be identified and provided as necessary. This parking will avoid preservation and conservation natural features.

Pedestrian and bicycle access to the greenway will only be allowed from vehicle parking areas and access points established by the managing agency. Although access to and use of the Greenway by residents of all adjacent neighborhoods will be encouraged and facilitated subject to reasonable controls, the managing agency will establish an application and review process for future access from adjacent neighborhoods and roadways.

### **Natural Resource Protection**

The sum of these efforts will be to limit activities and users of the Greenway to the established trail system, gardens, and open pastures. Fencing and signage will be provided in order to facilitate this regulation, as well as designated parking areas and a prohibition against motorized vehicles on any of the trails. Resource identification will be provided by signage and field guides to inform the public about all Greenway natural resources.

### Soil and Water Resources

Soil and water resources within the Greenway will be protected by: (1) conservation and active management within the guidelines of the Miccosukee Canopy Road Greenway Forest Stewardship Management Plan of existing forest and other vegetation communities within the Greenway; (2) limiting development within the Greenway to passive recreational facilities; and (3) strict adherence to all permit requirements during construction of any recreational facilities. In regard to the latter, erosion controls are required for all significant construction activities, and use of these erosion controls will help prevent soil from being eroded into any water bodies or water courses within the Greenway. All severe and significant grades will be protected from intensive development by placement of these features into conservation easements.

### Biology

A survey of vegetation and animal species and migratory birds, as well as identification of any listed species, will be conducted during the first year of park operation. This will be conducted by trained personnel from the Leon County Department of Community Development's Division of

Growth and Environmental Management with assistance from the City of Tallahassee and various state agencies, nongovernmental conservation and other organizations, and individual volunteers.

#### Exotic Plant and Animal Removal

Found in many areas of Leon County, Chinese Tallow trees have been identified within the Greenway, and their removal would be consistent with state standards and practices for conservation and other state lands. The common treatment is to inject these trees with Garlon, a systemic herbicide. State grants will be pursued in order to fund these projects.

Kudzu and Cogon grass are invasives that have been identified within the Greenway and on adjacent properties. The City of Tallahassee in cooperation with Leon County and the State of Florida is using sheep in an innovative management project to control the growth of these invasive plants. The pilot project underway will run for approximately five years, with annual renewal based on project evaluation. A flock of 500 to approximately 1,000 sheep is being used to eliminate selected vegetation at Tom Brown Park, the Lafayette Heritage Trail, the Phipps-Overstreet Greenway, the Miccosukee Canopy Road and Greenway, and under City electric transmission lines.

The flock of sheep is being controlled by a shepherd 24 hours a day. The shepherd has a herding dog to assist in moving the flock, and a guard dog to keep coyotes and other predators away. The flock is being contained by an electric fence or stock fence during the day and stays in a temporary corral at night. The sheep stay in one area for two or three days, depending on the density of the vegetation. The flock is expected to graze four or five acres per day (approximately one mile of right-of-way) every six or seven days. A "multi-pass" method is being used to eliminate regrowth of selected vegetation. The sheep graze an area once and then return to the same area later for additional grazing. This eliminates or reduces any new shoots, which causes the tubers to use up their reserves of starch and die off.

#### Educational Programs

A volunteer effort will be made to provide for regular and special education events, such as interpretive hikes, native wildflower research, introduction of native species, development of a butterfly meadow, development of full-color field guides for native plants, birds and other wildlife, and instructional programs involving Leon County Extension Services and Leon County Schools. Additional program assistance will be sought from TEAM GREEN, an Office of Greenways and Trails environmental education program.



## **Plant and Animal Community Management Practices**

This section of the management plan is taken from the Miccosukee Canopy Road Greenway Forest Stewardship Management Plan (2000), prepared by Stan Rosenthal of the Leon County Extension Service and Wayne Harris of the Florida Wildlife Commission. This plan should be consulted in full for these management practices and additional related information.

### Timber

Silvicultural activities will involve maintaining a natural diversity of plant communities. Longleaf pine which historically occurred in greater numbers will be reestablished on some of the uplands. Invasive exotics will be controlled throughout. Safety will also be a concern along Miccosukee road and in parking and other areas frequented by people. Prescribed fire and selection cutting will be the main management tools in upland stands. Herbicide treatments and hand planting should be utilized where other methods are inadequate, or if prescribed fire cannot be done in areas where the risk of smoke or fire is too great on adjacent human populations and development.

### Wildlife

Wildlife management will involve maintaining many of the naturally occurring plant and animal communities by utilizing prescribed fire on upland sites. Featured species being managed for include both game and non-game native wildlife. Upland stands will be maintained with early growing season (February-June) prescribed fires on a two to three year frequency. Permanent openings will be established at the inter-face between upland and wetland communities as well as in specified areas within upland stands. Portions of these openings will be planted to various wildflowers, small grains, and legumes to provide a supplemental food sources for resident wildlife species while enhancing aesthetics and wildlife viewing opportunities. Maintenance of the unplanted portions of the openings will be accomplished by mowing and seasonal soil disturbance. Mowing should be conducted September through February to avoid disruption of ground nesting species, such as turkey and quail. Fireline maintenance should be conducted during the winter months when soil disturbance encourages the production of beneficial native food plants such as partridge pea, milk pea, and beggerweed. Under-stocked upland sites will be reestablished to longleaf pine by natural regeneration with reinforcement plantings. This species of pine will be most conducive to ensuring adequate forage production through the use of prescribed fire. During reforestation efforts as many standing snags as possible shall be left standing for the benefit of cavity nesting species. Pets must be on a leash to avoid killing and harassing wildlife. Stray cats and dogs should be reported to the proper authorities for removal.

### Aesthetics

Natural forests and pastoral agricultural areas, including wildflower meadows, will be promoted for a high visual quality. Special attention will be given to preserving already existing viewsapes for both road and park users.

### Recreation

There are abundant opportunities for hiking, birdwatching, wildlife viewing, bicycling, and horseback riding. Establishment of trails, utilizing existing logging roads and construction of

catwalks across wetland sites will facilitate access to the property as a whole, without inhibiting natural water fluctuation. Along trails, interpretive signs will allow users to identify flora and other points of interest. management of openings by planting to wildflowers and wildlife forages will also increase viewing opportunities.

### Agriculture

Various types of agriculture have had impacts on the land, and some of these are considered desirable. Sometimes other management techniques can achieve the same results. These may include mowing and discing.

## **Other Management Practices**

### Archaeological Resources

Any archaeological resources discovered onsite will be preserved *in situ* and protected consistent with the Department of State's Division of Historical Resources. Signage will be placed specifying that disturbance of any cultural sites or removal of artifacts shall be prohibited, unless prior authorization has been obtained from the Division of Historical Resources. These signs shall state that disturbing sites is a criminal offense and include a telephone number to report vandalism.

### Prohibited Activities

The managing entity reserves the right to prohibit any such activities which may jeopardize or impede the public safety or enjoyment of the general public on the property; threaten or harm the natural resources of the property; or interfere with the privacy of adjacent landowners.

### Site identification

The park will be identified as the Miccosukee Canopy Road Greenway. All literature will identify the Department of Environmental Protection, Office of Greenway and Trails, the Trust for Public Lands, the Friends of the MCRG, and the Leon County Board of County Commissioners as contributing to the creation of this park, and will state that the Greenway is managed by the Leon County Division of Parks and Recreation.

### Management Agreements

Management agreements for grass management and special event or other temporary concessions as described above are planned. These agreements will be assigned to Friends of the MCRG for management purposes.

### Access

Public vehicular access will be at four public parking areas: Fleischmann Road, Edenfield Road, Thornton Road, and Crump Road trailheads. All access points will have directional, informational and regulatory signage. No access will be provided to water bodies. Fencing surrounding parking areas will prevent motorized vehicles from using park trails.

### Easements

There is one known easement owned by the Florida Gas Transmission Co, Inc. There is an approximate 11-acre conservation easement on the north side of the eastern trail, and various electrical, drainage and telephone easements along the Miccosukee Road corridor. Three right of way easements have been granted across the Greenway for the purpose of extending Edenfield, Arendell and Dempsey Mayo roads north of their termination on Miccosukee Road to the proposed Welaunee Boulevard. (See Map 5.) Miles Johnson road may be extended north to Welaunee Boulevard as well.

### Maintenance

The Leon County Division of Parks and Recreation, with volunteer assistance, will provide for trail cleaning, pruning and upkeep; sign repair and repainting; trail blazing; mowing of trails; mowing of fields in accordance with agricultural plan; control of exotic plant and other species; and boardwalk and building maintenance.

All prescription burns will strictly conducted by trained professionals with at least one burner certified by the Florida Division of Forestry (DOF) in accordance with the forestry stewardship plan, a completed burn plan, and all DOF-required permits. Where prescribed burning is not feasible nor desirable, mechanical harvesting of undesirable materials shall be conducted.

Smoke-sensitive areas include Interstate-10, Miccosukee Road, Crump Road and all neighborhoods adjacent to or in close proximity to the park. Firelines will be established and maintained around the perimeter of the property. Natural breaks, roads, and trails will be used where possible. Cutting firelines in wet areas will be avoided, as this could be damaging to wetlands. Authorization from the Florida Division of Forestry must be acquired before burning. Fireline establishment and maintenance services can be obtained from this department as well.

In addition, a forestry consultant will be considered to assist with prescribed burning. A "burn plan" will be completed prior to prescribed burning. This burn plan will require the notification of adjacent and other affected subdivisions and neighborhoods, including signage and other means of communication as necessary and/or appropriate. A public meeting will be held as far in advance as reasonable of any burning activities are conducted in order to communicate the need for burning specific tracts, natural communities, or other areas, and to solicit and respond to any public concerns or comments.

Exotic plant species shall be controlled or eliminated where feasible with the use of sheep as previously described and/or by other means, including fire, herbicides, and mechanical or hand removal.

### Security

The primary security will be provided by the Leon County Sheriff's Office. Additional security measures will include perimeter fences, lockable gates preventing motorized vehicles, and posted hours of operation, which will be from sunup to sundown. A public telephone will be installed at each established parking areas within the Greenway. Neighborhood watch committees will be requested to consider expanding their programs by the Friends of the Miccosukee Canopy Road Greenway.

## **Administration**

### Staffing

Paid staffing for the Greenway will be provided by the Leon County Parks and Recreation Division. The Friends of the Miccosukee Canopy Road Greenway citizens organization will help provide volunteers for park construction, maintenance, and special projects.

### Event Coordination

A volunteer effort will be made through the Friends and other local community groups to encourage use of the park for special bike-ped and equestrian events, fairs, interpretive hikes, and symposia.

### Adjacent land use coordination

The Leon County Parks and Recreation Division and the Friends of the MCRG will maintain contact with adjacent land owners regarding any changes in land uses and/or Greenway activities.

## **SCHEDULES AND FUNDING**

### **Priority Schedule and Cost Estimates for Management Activities**

A timetable of animal and plant community management activities is included in the Miccosukee Canopy Road Greenway Forest Stewardship Management Plan (2000). A copy of this schedule is included as Appendix H.

The proposed recreational improvements schedule is shown in Table 1. Phase I represents those improvements which have priority over those in Phase II, or which can be accomplished more immediately. Native plantings and garden construction and planting will take place seasonally.

The Leon County Division of Parks and Recreation will provide the necessary machinery and manpower to implement most of the major improvements, and will contract out those services that the Division or the volunteers cannot properly handle, either because of time, personnel, and/or safety issues. The soft-surface trails, butterfly meadow, and memorial gardens will be designed and constructed by volunteers, including the Friends of the Miccosukee Canopy Road Greenways and adjacent neighborhood associations. The Leon County Division of Parks and Recreation will provide some components of these gardens, including potable water.

### **Funding**

Leon County, the land manager, appropriated \$250,000 in 1998 for initial development of the Greenway. Portions of these funds have been used to construct the perimeter fencing, develop parking areas, and eradicate invasive plant species such as kudzu. Additionally, these funds have been used to prepare engineering and permitting drawings for driveways, road crossings, and passage of the future trail under Interstate 10, pending approval of the management plan. An additional \$50,000 was appropriated each year in 1999 and 2000. These funds have been used for maintenance and land management of the greenway.

In addition, the Friend of the Miccosukee Canopy Road Greenway have applied to the Florida Department of Transportation for matching (80 percent FDOT, 20 percent local) enhancement project funds for the provision of bicycle and pedestrian facilities and related safety and educational activities. These funds would implement the proposed improvements listed in Table 2, and have been budgeted as follows:

Master Planning Activities	\$25,000
Project Development and Environmental Studies	\$20,000
Engineering and Final Plans Preparation	\$75,000
Right of Way Acquisition	\$0
Construction	\$625,500
Construction Engineering and Inspection	<u>\$18,500</u>
<b>Total</b>	<b>\$764,000</b>

Cost estimates for Estimates for Animal and Plant Community Management Activities are presented in Table 3.

**Table 2: Proposed Improvements Schedule.**

	March 2001	June 2001	Oct. 2001	Jan. 2002	March 2002	June 2002	Oct. 2002	Jan. 2003
<b>PHASE 1</b>								
Biological Survey	X							
Pedestrian/Equestrian Crossings			X					
Parking Areas			X					
Trail Benches, Gazebos, and/or Shelters					X			
Bike/Ped Trail	X							
Equestrian Trail	X							
Signage			X					
Arvah Branch Boardwalk			X					
Portable Toilets (all trailheads)				X				
<b>PHASE 2</b>								
Butterfly Meadow					X			
Memorial Gardens					X			
Native Plantings					X			
Wildlife Observation Deck and Boardwalk					X			
Educational Program Development						X		
Picnic Pavilions								X
Concession Buildings with Restroom Facilities								X
Edenfield Meadow Hard Surface Trail								X

**Table 3: Cost Estimates for Animal and Plant Community Management Activities.**

	Cost/Unit	No. of Units	Frequency	Totals
Blue Bird Boxes	\$10/box	40 boxes	Once	\$400
Wildflower Plantings	\$400/acre	2 acres	every 3-5 years	\$800
Mowing	\$20/acre	97 acres	8-13 times/year	\$15K-25K
Mowing	\$20/acre	32 acres	every 3 years	\$300
Prescribed Burning	\$11 to \$20/acre <sup>3</sup>	267 acres	every 3 <sup>rd</sup> year	\$3K
Buffer Plantings	\$100/acre	5 acres	once	\$500
Invasive Exotic Control (excludes Kudzu)	\$500/acre	425 acres	frequent	\$50K

<sup>3</sup> The low end of this range is average for rural areas in the Southeast, and the higher end is average for area near urban developments. The costs for prescribed fire will vary according to the degree of added preparations and protections made necessary by nearby development and/or population sensitivity to smoke. These costs do not include any added fire protection by the City of Tallahassee Fire Department. At this time, the costs of any involvement in a standby mode by TFD would not be borne by Leon County.